



NOTEBOOKS FAQ

Q I've seen powerful notebooks with desktop processors. Is this normal?

A Yes. Some notebook chassis are designed to take desktop processors. Most common is the use of Intel Pentium 4 desktop processors rather than the Pentium M variety. Desktop processors are generally more powerful and often more cost-effective than their mobile equivalents. However, desktop processors generate more heat, so you get noisier fans and the power demands of these processors are higher, so battery life is much shorter. Also, the need for big batteries means notebooks with desktop processors are usually much larger, and so are not suited for everyday mobile use.

Q What are the differences between PC Card, CardBus and PCMCIA cards?

A PC Card is the catch-all term for the long, thin cards used to add extra ports and capabilities to a notebook computer. The first of these is the PCMCIA variety. These are 16-bit cards and have limited performance.

CardBus came along in 1996, roughly the same time as USB first appeared. So if you have USB on your notebook, the PC Card slot is probably CardBus-compatible. CardBus cards are 32-bit and the vast majority of PC cards available today are CardBus varieties.

CardBus slots are usually compatible with the older PCMCIA standard. However, you can't fit CardBus cards in PCMCIA slots. There is little that differentiates the cards, but CardBus cards have small, rivet-like bumps on the metal end, and the notch on the left-hand side is shallower. This prevents the CardBus card being plugged into an incompatible PCMCIA slot.

If you have an old notebook that has only a PCMCIA slot and want to add wireless networking, there are some PCMCIA cards around. Unfortunately they are not commonly available any more, so you'll need to search for one. Try eBay first at www.ebay.co.uk. For more information see *Helpfile, Shopper* January 2006.

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▲ The 32-bit CardBus card is now the standard PC Card, but it looks very similar to older PCMCIA cards

REVIEW NOTEBOOK PC

ROCK Xtreme CT 2.0GHz

RATING ★★★★★

PRICE £1,409 inc VAT

SUPPLIER Rock Direct 08709 909090

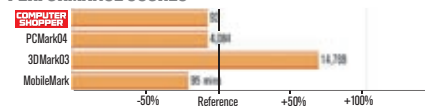
DETAILS www.rockdirect.com

Nvidia's 7800 graphics processor took the desktop world by storm when it was released and allowed nVidia to take a healthy lead over the competition. Fortunately for notebook gamers it was quick to release a mobile version of the card. Previously we've seen a 7800 GTX in a large chassis with a desktop processor. Rock has combined it with a Pentium M processor in a more portable form.

It is still a large notebook, mainly due to its 17" display, but it is far less chunky than AJP's D900T-X, which we reviewed in *What's New*, January 2006. It's very well made, although we're not keen on the bright silver plastic. There's a full keyboard with number pad, and the keys themselves are firm and springy. The touch pad is large and accurate, but most people will plug in a mouse anyway.

The Xtreme CT 2.0GHz has all the usual ports, including four USB2 ports, and there's also DVI output for a projector or HDTV should the notebook's screen size prove inadequate. This isn't very likely, though, as the 17" widescreen display is perfectly suited to most tasks. The display walked through our standard image tests, and it was bright, clear and accurate. Testing with games software showed no appreciable motion blur from the panel, either. It's one of the best notebook displays we've seen and a worthy match for the 7800 GTX.

PERFORMANCE SCORES



To test visual quality we used Call of Duty 2 (CoD2), as it has good widescreen support. We were impressed with the screen's ability to scale our selected resolution to its huge native one of 1,680x1,050. Running CoD2 at that resolution is possible, but you have to sacrifice effects such as anti-aliasing for a smooth experience.

The CT managed a blistering 85.2fps in our standard Doom 3 test at 1,024x768 in high quality with 4xAA. This puts it on a par with the desktop 7800 GTX systems in our recent test of gaming PCs. Cranking the settings up to 1,280x1,024 in Ultra detail still produced a super-smooth 61.9fps. These results show that this notebook will play any game in gorgeous detail for some time to come.

Application performance was less impressive. A score of 92 in our *Shopper* benchmarks was lower than expected, but still more than enough for day-to-day tasks. The smallish 60GB hard disk will force you to uninstall unused games from time to time.

It isn't a great all-rounder, but this notebook has performance where it counts and a great display. If you want a notebook to play all the latest games, the Xtreme CT is highly recommended.

Seth Barton

✓ Great 3D performance in a reasonable chassis

✗ Average application performance; small hard disk

SPECIFICATIONS 2.0GHz Intel Pentium M 760, 1GB RAM, 60GB hard disk, 256MB nVidia GeForce Go 7800 GTX graphics, DVD+-RW DL drive, 17" LCD, weighs 4.3kg. **Part code** XCT-2.0

HOTLIST NOTEBOOK PC

ACER Ferrari 4005 WLMi

RATING ★★★★★

PRICE £1,195 inc VAT

SUPPLIER www.acernotebooks.co.uk

DETAILS www.acer.co.uk

The latest notebook in Acer's Ferrari range has more tasteful styling than its previous gaudy efforts. What's more, it's a slim and well-built notebook with a lot of impressive 2D and 3D performance.

It is crammed with features such as a two-layer DVD writer and built-in Bluetooth, and it has a huge 100GB hard disk and a gigabyte of RAM. The Radeon X700 graphics chipset will let you run all the latest games, although you may need to reduce detail levels to keep frame rates smooth.

The soft rubber keyboard surround makes typing comfortable and the high-resolution screen



has excellent contrast and colour saturation. The 4005 WLMi is also good value, showing that Acer is not charging over the odds for the Ferrari branding, despite the carbon-fibre lid.

SPECIFICATIONS 2.0GHz AMD Turion 64 ML-37, 1GB RAM, 100GB hard disk, ATI Mobility Radeon X700 graphics, DVD+-RW DL, 1,680x1,050 widescreen LCD, weighs 3.05kg. **Part code** LX.FR405.033



REVIEW NOTEBOOK PC

EVESHAM
Quest A220Plus

RATING ★★★★★

PRICE £699 inc VAT

SUPPLIER Evesham 08716 661616

DETAILS www.evesham.com

Evesham submitted the Quest A220 to our Labs test of budget notebooks in *Shopper* December 2005. This example has better specifications than its predecessor, and the price has risen from £586 to £699. We were interested to see if this upgraded model can compete at this higher price.

The notebook has a 15.4" widescreen display with a 1,280x800 resolution. The display itself is of excellent quality and produced a clear bright white with no tinges of colour or uneven backlighting. Greyscales were smooth and colours were bright. For a notebook at this price, it's great.

The chassis is also excellent, with little flex in the body. Unfortunately, the plastic casing feels a little cheap. There are all the usual ports, with four USB2 ports arranged in pairs on either side for easier use. Headphone and microphone sockets are conveniently placed on the front of the unit.

The keyboard is spacious and doesn't flex, but the keys lack feedback. The touch pad is acceptable, although it should have been shaped to match the widescreen display. The speakers are good for a notebook, with music sounding crisp and clear.

The chassis has a number of features that make it more media-friendly. You can boot the notebook into media player mode instead of Windows. This lets you play DVD, CD and MP3 files

from the optical drive. DVD playback is acceptable, but seemed a little fuzzy. The chassis has dedicated controls on the front, and there's also a remote control tucked away in the PC Card slot which can be used to control applications such as Media Player.

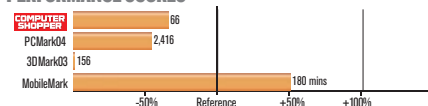
Inside the chassis a 1.6GHz AMD Turion MT-30 processor and 512MB of RAM keep all your media playing smoothly. A 60GB hard disk is provided for storage, with a two-layer DVD writer for backups.

Benchmark scores are a little disappointing compared to equivalently priced Intel-powered notebooks. That said, there is plenty of power for day-to-day tasks, as shown by the overall *Shopper* benchmark score of 66. If you plan to do a lot of photo editing or media encoding, however, you should look elsewhere. We found that 3D performance is very poor from the SIS chipset, scoring a lowly 156 in 3DMark03, so you won't be playing any games on this notebook.

The Quest A220Plus sets out to improve on what was a good budget notebook. Unfortunately it runs into some very tough competition in the £700 market, where its Turion processor can't compete. The media features and display are good, but better notebooks are available for the same price in this month's *Labs* on page 150.

Seth Barton

PERFORMANCE SCORES



✓ Great display; dedicated media playback mode

✗ Underpowered in application and 3D benchmarks

SPECIFICATIONS 1.6GHz AMD Turion MT-30, 512MB RAM, 60GB hard disk, 32MB SIS M760 graphics, DVD+/RW DL drive, 15.4" LCD, weighs 2.85kg

HOTLIST NOTEBOOK PC

HP
Compaq nx6110

RATING ★★★★★

PRICE £453 inc VAT

SUPPLIER www.laptopsdirect.co.ukDETAILS www.hp.co.uk

HP's Compaq nx6110 won a Best Budget Buy award in our Labs test of budget notebooks in *Shopper*, December 2005. This superb notebook has excellent build quality with a tough chassis and no-nonsense business looks. The keyboard and touch pad are a joy to use, and feel as if they'll last for a long time. The display is vibrant and the speakers are clear and loud.

It isn't a powerhouse but will easily manage day-to-day tasks such as office applications or web browsing. If you need more performance you can add 256MB of extra RAM for around £25. The battery lasted almost four

hours in our tests. It's a well-built notebook that was a good buy for £504, and is now a real bargain at only £453 including VAT.

SPECIFICATIONS 1.4GHz Intel Celeron M 360, 256MB RAM, 40GB hard disk, Intel 915GM integrated graphics, CD-RW/DVD combo drive, 15" LCD. Part code PY496ET



Our round-up of the best new gadgets and software

DVD The United States of Leland

RATING ★★

PRICE £10 inc VAT

DETAILS www.play.com

When Leland (Ryan Gosling), a seemingly well-adjusted teenager, stabs a mentally disabled boy to death, prison teacher Pearl (Don Cheadle) is determined to find out why. Was it because of his break-up with the victim's sister (Jena Malone)? Or is it to do with his unusual relationship with his father (Kevin Spacey)? Writer-director Matthew Ryan Hoge seems more interested in demonstrating how clever he is with a camera than explaining Leland's motives, and while the portentous tone indicates that the film has something important to say, it's never clear exactly what. The result is a drearily pretentious movie that largely wastes an accomplished cast. The disc includes a trailer.

Chris Miller

MICROSOFT
Notebook Optical Mouse 3000

RATING ★★★★★

PRICE £19 inc VAT

SUPPLIER www.savastore.comDETAILS www.microsoft.com

Microsoft's Notebook Optical Mouse 3000 is very small and will fit snugly into your notebook bag, so you can use it when you're travelling. We found it OK to use, but if you have large hands or use it for prolonged periods of time, it could get rather uncomfortable. The USB cable is quite short, so you may find you need to carry an extension cable with you.

Microsoft's IntelliPoint software can be used to configure your mouse extensively, including the ability to adjust the pointer speed and configure the buttons. The default button settings include a horizontal and vertical scroll wheel, left- and right-click and a tiny button that magnifies the display around your cursor.

The software is full of features but the tiny size means it isn't suitable for everyone.

Alan Lu



REVIEW **NOTEBOOK PC****ACER**
Aspire 5514WLMi

RATING ★★★★★

PRICE £1,070 inc VAT

SUPPLIER Acer 08701 670819

DETAILS www.acer.co.uk

Where once notebooks were designed as mobile business devices, they are now just as common around the home. These house-trained laptops are often second computers, used for surfing the net, reading email, doing homework or watching DVDs. This new Aspire adds an analogue and digital TV tuner to this range of family-friendly capabilities.

We've recently seen USB TV tuners as small as a flash drive and costing as little as £50, so the Aspire has its work cut out arguing the case for an integrated tuner. It has chosen the excellent PowerCinema 4 as the software component, here re-skinned to become Acer Arcade. This combines TV, DVD and media file playback in one slick package. TV support includes a great EPG for scheduling recordings. Picture quality from the TV tuner is good, and on a par with USB TV tuners.

The monitor is ideally suited for all this media playback. It's an Acer CrystalBrite display with a gloss coating that improves contrast and colour vibrancy. The 15.4" screen supports a decent resolution of 1,280x800. It did well in our display tests, showing a reasonable greyscale and smooth colour wheel. A more applicable test with a few DVDs gave equally pleasing results.

If you ever get round to doing any work, you'll find that the Aspire is no slouch in that department.

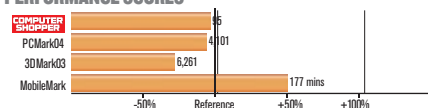
The specification includes a 2GHz Pentium M processor and 1GB of RAM so it was no surprise that it did well in our *Shopper* benchmarks, with an overall score of 95. This means it has plenty of power for photo manipulation or video work, and the 100GB hard disk is up to those tasks, too.

Graphics performance isn't too bad, thanks to the ATI X700 graphics chipset. This produced a score of 6,261 in 3DMark03 and a very respectable 44.9fps in Doom 3 at 1,024x768 in high detail. It will play all the latest games, though not at the highest detail settings.

The build quality of the chassis is very high. The touch pad is big and shaped to match the widescreen display. The keyboard could be firmer, but is passable in use. The Aspire 5514 has all the expected ports plus a 4-in-1 card reader, a slot-loading DVD writer and a breakout lead with S-video, composite and phono inputs.

This notebook really impressed us, as it seems to provide all things for all people, making it an ideal luxury family notebook. It isn't cheap, though, and many of its functions could be performed by a cheaper notebook with a USB TV card. But if you need the extra performance and want a great integrated TV setup, this is a perfect choice.

Seth Barton

PERFORMANCE SCORES

✓ Well-integrated hybrid TV tuner; great all-round performance

✗ Heavy

SPECIFICATIONS 2GHz Intel Pentium M 760, 1GB RAM, 100GB hard disk, 256MB ATI Mobility Radeon X700 graphics, DVD+-RW DL drive, 15.4" LCD, hybrid TV tuner, weighs 3.1kg. **Part code** LX.A7705.032

HOTLIST **NOTEBOOK PC****MV**
Mobeus MV011107

RATING ★★★★★

PRICE £910 inc VAT

SUPPLIER MV 08718 554668

DETAILS www.go-mv.com

Although it's not quite an ultra-portable, MV's Mobeus MV010652 is an extremely powerful notebook that is still light enough to carry around. Its silver lid may be an acquired taste, but the black interior looks smart and the notebook feels durable. It has an excellent keyboard and is brimming with features, including Bluetooth and a DVD writer. Its reflective widescreen LCD produces saturated colours and very bright whites, but the touch pad is not particularly accurate.

The Mobeus's performance is probably its most impressive aspect. It achieved very high scores in the *Shopper* benchmarks and PCMark04

thanks to its 2GHz Intel Pentium M processor and gigabyte of system memory, and it has over three hours of battery life for travelling.

SPECIFICATIONS 2GHz Intel Pentium M 755, 1GB RAM, 60GB hard disk, integrated Intel 855GME graphics, DVD+-RW DL, 12.1" widescreen LCD

BYTE SIZE!

Our round-up of the best new gadgets and software

ZYXEL
AG-225H

RATING ★★★

PRICE £52 inc VAT

SUPPLIER www.misco.co.ukDETAILS www.zyxel.com

Zyxel's AG-225H is a USB 54G wireless network adaptor and wireless network finder. When not plugged into your PC or notebook it detects any nearby wireless networks.

The AG-225H has a small LCD and 'seek' and 'next' buttons. When in the standard seek mode, the adaptor will find all nearby networks and display signal strength, channel, network ID and encryption information. In free mode, it will list all networks without encryption, and the dedicated mode will fix the network finder on one wireless access point.

The AG-225H works well as a USB wireless adaptor and the seek mode is useful if you need to find wireless hotspots regularly. However, it is £30 more expensive than a standard USB wireless adaptor.

Chris Finnamore

THINK OUTSIDE
Stowaway Bluetooth Keyboard

RATING ★★★★★

PRICE £68 inc VAT

SUPPLIER www.expansys.comDETAILS www.thinkoutside.com

Think Outside's Stowaway Bluetooth Keyboard is a foldaway keyboard that connects to most Bluetooth-enabled Pocket PC PDAs, as well as Symbian UIQ and Series 60 smartphones.

When folded shut, the keyboard is about the same size as an average PDA. The keyboard opens and shuts with a solid click and, apart from the flimsy PDA cradle, it feels very tough. Touch-typing is easy, as the large keys have plenty of travel, but if you use only a couple of fingers to type, the keyboard tips up when you strike keys at its left and right edges.

If you need a keyboard that connects to your PDA as well as your smartphone this is a good buy, but standard wired PDA keyboards are cheaper.

Chris Finnamore



BYTE SIZE!



Our round-up of the best new gadgets and software

MICROSOFT Wireless Optical Desktop 5000

RATING ★★★★★

PRICE £49 inc VAT

SUPPLIER www.morecomputers.co.uk

DETAILS www.microsoft.com

Microsoft's Optical Desktop 5000 is a



wireless mouse and curved keyboard that's somewhere between a natural keyboard and a standard one. The mouse is well designed and is perfect for right-handers. The largely unused side buttons from the original Intellimouse have been shrunk and placed under the thumb. There's also a tilting scroll wheel, which scrolls smoothly.

The individual keys are firm and responsive, but we didn't like the layout. To the left of the keyboard is a zoom control and shortcut buttons for the included photo retouching software. This isn't a bad package, but it's best to try the keyboard before you buy.

Seth Barton

BE.EZ Larobe B&W

RATING ★★★★★

PRICE £18 to £30 inc VAT depending on size

SUPPLIER www.apple-shop.co.uk

DETAILS www.be-ez.com

Think French chic rather than American city, and you're on the same track as this notebook bag.



Larobe was originally designed for Apple Powerbook owners but will also fit slender Windows notebooks. It comes in a variety of sizes to fit the various Apple and PC notebooks and you can even get them for your PSP.

The Larobe is a well-constructed polyurethane zip-up pouch. The material will give perfect protection from scratches, letting you slip your notebook inside a favourite bag. Shock protection is amazing from such a thin fabric. We hit it with a hammer and it resisted our blows, leaving the contents unmarked.

It's a little pricy, and we hate the name, but it will protect your notebook.

Seth Barton

CHOOSING A...

NOTEBOOK COMPUTER

Follow our simple step-by-step advice to find the perfect notebook PC for your needs and your budget

1 The minimum specification of notebook we recommend, shown below in grey, is a good starting point when working out your ideal system. This is an average notebook that should cost around £700. It is not particularly powerful or, at 3.5kg, particularly portable. Mobile processors increase battery life and are becoming more common, even at this price.

2 Most people want a better notebook than the minimum – but what is your definition of better? Do you want something more powerful, or lighter and better-looking? Desktop replacement notebooks, which approach the power of a full-size PC, are necessarily large to house the extras. These usually include a desktop processor and larger battery to keep the whole lot running for any length of time.

3 If portability is your main priority, keep the spec modest (a Pentium M 1.7GHz with a 15" screen, say) but spend more. This will buy you an executive notebook with the kind of cutting-edge design required to miniaturise without compromising usability. Clever chassis, expensive batteries and the finest materials are prerequisites for superior ultra-portable notebooks.

4 There are features you can add to a notebook without piling on weight or reducing battery life. A 60GB, 80GB or 100GB hard disk and 1GB of RAM won't hurt. Another possibility is an external drive that you can carry with you or leave at home according to the nature of your trip. Some ultra-portables can attach to an optional docking station, which incorporates drives, ports and extra power for when you need it. It's the best of both worlds, but tends to be expensive.

5 If you're not swayed by ultra-portable chic, you can get a lot more for your money. Today's desktop replacements pile on the features but still keep the price well under £1,500. Alternatively, go for a balanced package: middling power and price in a reasonably portable package. Which one you pick depends on how much power and which features you need, so consider each in turn.

6 Notebooks run the same software as desktops, so our advice on the core specification is the same (see page 16). However, hard disks go up to only

100GB and even the best notebook graphics lag slightly behind desktops.

7 DVD rewriter drives are standard and will allow you to burn CDs and DVDs on the move. If you want to watch movies, consider buying a notebook with a widescreen display.

8 A 1,024x768 screen is the entry level these days, but its size will depend on the notebook's purpose. Ultra-portables might have screens as small as 9". Widescreen displays have resolutions of 1,200x768 upwards but make for a bulkier notebook.

9 A modem and regular 10/100 Ethernet port are standard. Centrino notebooks also have wireless 802.11b or 802.11g networking (WiFi), and it's becoming increasingly popular on all models. IEEE-1394 (FireWire) and Bluetooth can be added to the default TV-out and USB2.0 ports. Memory card readers are extremely common, so check that your camera or MP3 player's format is supported.

10 Once you're happy with your specification, start to shortlist some models you can afford. Check the weight and battery life of each of them. If these aren't acceptable, you need to reconsider how much power and which features you really need.

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

PROCESSOR: Intel Celeron 2.66GHz

MEMORY: 512MB DDR

HARD DISK: 40GB

STORAGE: DVD rewriter

GRAPHICS: Integrated
(using system memory)

SCREEN: 1,024x768 LCD

EXTRAS: Wireless networking, FireWire

CONNECTORS: Three USB2, network, modem

SOFTWARE: Windows XP Home Edition

WEIGHT: 3.5kg